F Canyon

F Canyon is located in F Area, one of two chemical separations areas at SRS. The facility's production mission was completed in March 2002, when solvent extraction processing was concluded.

Currently, deactivation activities are well under way, with the goal of reducing the hazards associated with F Canyon's legacy processes and preserving the facility's infrastructure in a "safe storage" condition until its final disposition is determined and decommissioning initiated.

Historically, F Canyon operations recovered plutonium-239 (Pu-239) and uranium-238 (U-238) by a chemical separation process after dissolving aluminum-based irradiated fuel slugs or rods from the site's production reactors and other test and research reactors.

Pu-239 was produced to support the nuclear weapons stockpile. Depleted U-238, in an oxide (solid) form, was recovered as a by-product; a large portion remains stored at SRS. No new production of plutonium is needed because of the reduction in the nation's nuclear weapons stockpile.

In February 1995, the Department of Energy decided to resume chemical separation operations in F Canyon to stabilize and manage most of the remaining inventory of plutonium-bearing materials at SRS. Most of the stabilization actions were essentially the same as historic operations.

DOE has committed that plutonium-239 from stabilization actions will not be used for nuclear weapons purposes.

F Canyon was constructed in the early 1950s and began operation in 1954. The building is called a canyon because of its long, narrow shape. It is 835 feet long, 122 feet wide and 66 feet high. All work in the canyon is remotely controlled, and employees are further protected from radiation by thick concrete walls. Equipment and piping are maintained using overhead bridge cranes.

During separations operations, nuclear materials were directly fed to the dissolvers. Plutonium and uranium were separated from each other and fission products. Waste was transferred to the site's high-level waste storage tanks for eventual vitrification in the Defense Waste Processing Facility.

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